



**ELECTRONIC
INNOVATIONS**

IN ACTION

TUBES

PRELIMINARY TECHNICAL INFORMATION

These ratings represent those of current samples of this type. Refer to the Objective Technical Information sheet for design-objective ratings.

**DEVELOPMENTAL
TYPE**

**ZM-6205
PTI-153A
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This technical information is proprietary and is furnished only as a service to customers.

PACKAGED VOLTAGE-TUNABLE MAGNETRON

2750-3090 MEGACYCLES

1.00-WATT OUTPUT

The ZM-6205 is a voltage-tunable magnetron with integral load isolator for voltage-tunable operation in the 2750-3090 megacycle frequency range. It is a complete r-f power source package requiring only input power connections and an r-f power-output connection and has a minimum CW power output of 1.00 watt across the entire frequency range. The tube may be voltage tuned over a portion or all of the frequency range for which it is designed.

The ZM-6205 has a noise level of -95 decibels with respect to carrier, a power variation limited to 1.2 decibels over its entire frequency range and is environmentalized for airborne applications.

GENERAL

Electrical	Min.	Bogey	Max.	
Cathode - Directly Heated				
Filament Voltage*	2.0	2.5	3.0	Volts
Filament Current*	1.95	2.0	2.05	Amperes
Mechanical				
Mounting Position - Any				
Net Weight			2.75	Pounds
Thermal				
Type of Cooling - Conduction or Convection				
Ambient Air Temperature, operating			+85	C

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Maximum Ratings, Absolute Values

Anode Voltage	1000	Volts
Anode Current	12	Milliamperes
Power Input, with Forced Air Cooling	18	Watts
Injection-Electrode Voltage	205	Volts
Injection-Electrode Current	0.1	Milliamperes
Filament Current	2.05	Amperes
Voltage Standing Wave Ratio of Load, maximum	3:1	

Typical Operating Conditions

Operation with 60-cycle Sweep Voltage

Filament Voltage*, approximate	2.50	Volts
Filament Current*	2.0	Amperes
Tunable Range #	2750-3090	Megacycles
Tuning Sensitivity, approximate	3.35	Megacycles per Volt
Anode Voltage at 2.945 gigacycles	850	Volts
Anode Current, average	8	Milliamperes
Injection-Electrode Voltage, Positive with Respect to Cathode	75-205	Volts
Injection-Electrode Current	0.0	Microamperes
Power Output, minimum	1.0	Watts
Noise †	-95	Decibels/mc
Power Variation ‡	1.2	Decibels
Dynamic Tuning Rate Variation	± 5	Percent

The specifications of this type are subject to change. Delivery of samples and the existence of these data do not imply continued availability of types with the same characteristics or dimensions. For the most recent information concerning the status of this device, please consult your local Tube Department Regional Sales Office.

* Filament current should be adjusted to 2.0 amperes.

Frequency controlled by anode voltage.

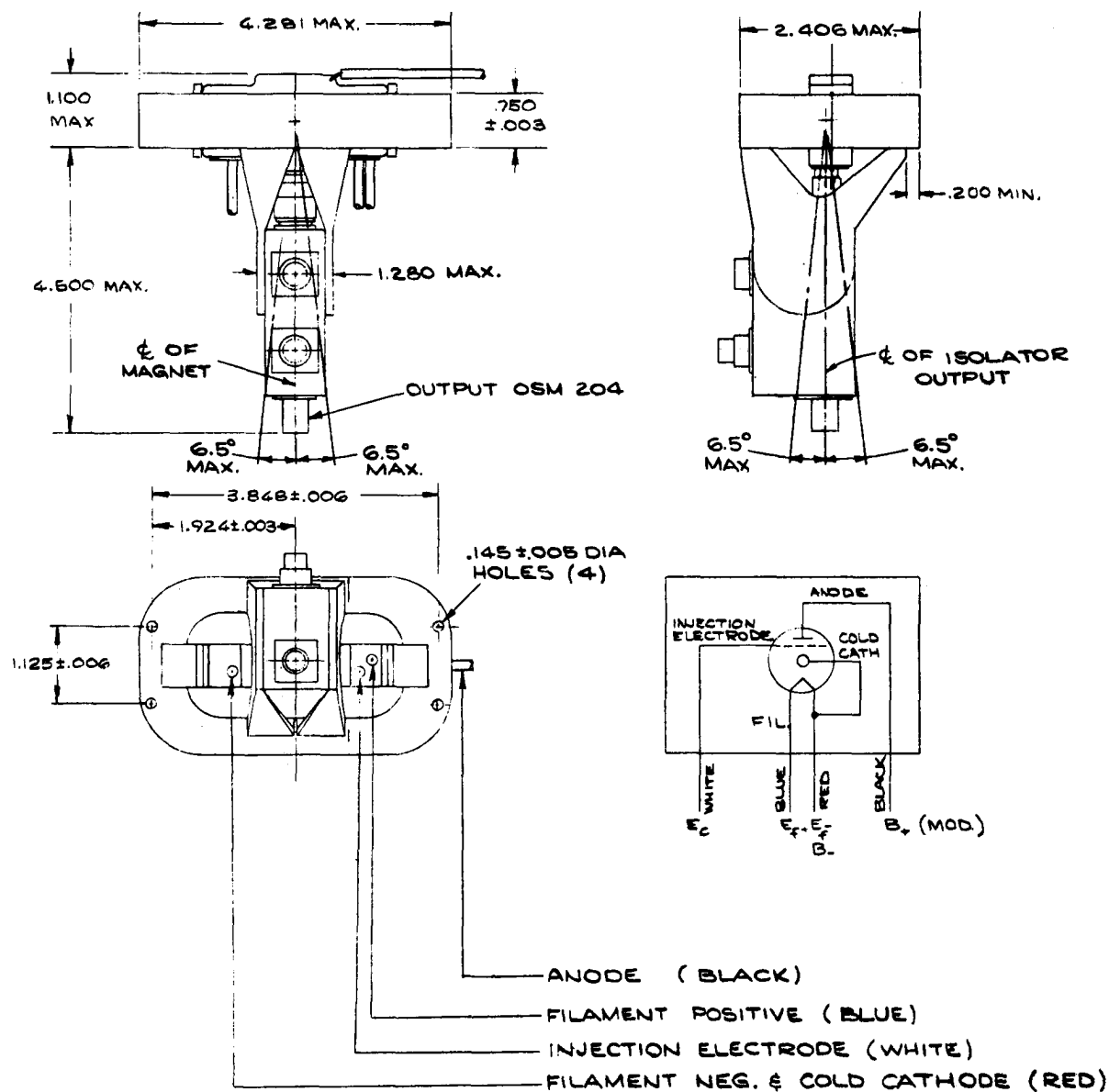
† This noise level is measured with respect to carrier level, 30 mc away from carrier.

‡ Measured across the entire frequency band and over a -55 C to +95 C magnet temperature range.

NOTE: Since a change in anode voltage of one volt produces a frequency change of approximately 3.35 megacycles, the anode supply should have sufficiently low ripple and high regulation to prevent an excess of frequency modulation.

CAUTION: A clearance of 6 inches between ferromagnetic materials and the tube will prevent serious change of the operating characteristics.

OUTLINE ZM-6205



NOTE:
USE NON-MAGNETIC STAINLESS
STEEL MOUNTING SCREWS

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